

**31.** An apparatus according to claim 30, wherein said Electrospray ionization means comprises nebulization assist.

**32.** An apparatus according to claim 30, wherein said ion source comprises bath gas flow to aid in drying Electro-sprayed charged droplets.

**33.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises a Time-Of-Flight mass spectrometer.

**34.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises a Quadrupole mass spectrometer.

**35.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises an Ion Trap mass spectrometer.

**36.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises a Fourier Transform mass spectrometer.

**37.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises a magnetic sector mass spectrometer.

**38.** An apparatus according to claim 30, wherein said means for mass analyzing said ions produced comprises a hybrid mass spectrometer.

**39.** An apparatus according to claim 30, wherein at least one of said at least two probes comprises a microtip.

**40.** An apparatus for analyzing chemical species comprising:

- a. an ion source which produces ions from sample bearing solutions;
- b. at least two probes from which at least two solutions are introduced into said ion source;
- c. at least one means for producing ions from at least two solutions introduced into said ion source;
- d. an Atmospheric Pressure Chemical Ionization means as at least one means for producing ions; and
- e. a means for mass analyzing said ions produced.

**41.** An apparatus according to claim 40, wherein said means for producing ions is by Electrospray ionization.

**42.** An apparatus according to claim 40, wherein said means for producing ions is by Electrospray ionization with nebulization assist.

**43.** An apparatus according to claim 40, wherein said probe is an Electrospray probe which comprises three tube layers at its exit tip.

**44.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises a Time-Of-Flight mass spectrometer.

**45.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises a Quadrupole mass spectrometer.

**46.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises an Ion Trap mass spectrometer.

**47.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises a Fourier Transform mass spectrometer.

**48.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises a magnetic sector mass spectrometer.

**49.** An apparatus according to claim 40, wherein said means for mass analyzing said ions produced comprises a hybrid mass spectrometer.

**50.** An apparatus for analyzing chemical species comprising:

- a. an ion source which produces ions from sample bearing solutions;
- b. at least two probes from which at least two solutions are introduced into said ion source;
- c. an Electrospray ionization means for producing ions from at least one of said solutions introduced into said ion source;
- d. an Atmospheric Pressure Chemical Ionization means for producing ions from at least one of said solutions introduced into said ion source; and
- e. a means for mass analyzing said ions produced.

**51.** An apparatus according to claim 50, wherein said Electrospray means comprises nebulization assist.

**52.** An apparatus according to claim 50, wherein said probe is an Electrospray probe which comprises three tube layers at its exit tip.

**53.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises a Time-Of-Flight mass spectrometer.

**54.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises a Quadrupole mass spectrometer.

**55.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises an Ion Trap mass spectrometer.

**56.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises a Fourier Transform mass spectrometer.

**57.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises a magnetic sector mass spectrometer.

**58.** An apparatus according to claim 50, wherein said means for mass analyzing said ions produced comprises a hybrid mass spectrometer.

**59.** An apparatus for analyzing chemical species comprising:

- a. an ion source operated substantially at atmospheric pressure which produces ions from sample bearing solutions;
- b. at least two probes from which at least two solutions are introduced into said ion source;
- c. at least one said solution introduced into said ion source is includes known chemical components;
- d. at least one means for producing and mixing ions from at least two solutions introduced into said ion source, said mixture containing ions from said known chemical components; and
- e. a means for mass analyzing said mixture of ions produced.

**60.** An apparatus according to claim 59, wherein said known chemical components are mass scale calibration compounds.